REMARKS

Claims 1 and 3-7 are pending in the application. Claims 1 and 3-7 were rejected under 35 U.S.C. §102(e) as being anticipated by Coffey in view of Black et al. Claims 1 and 3 have been amended. Reexamination and reconsideration of the application in view of the amendments and following remarks is respectfully requested.

Before addressing the Examiner's rejections, it should be noted that claims 1 and 3 (and therefore all of the pending claims) have been amended to clarify two points: (1) that the first and second ports are connectable to devices, and are therefore distinct and separate entities from the devices, and (2) that the direct paths or routes between the first and second ports, created by the crossbar switch, exclude all other ports (i.e. do not pass through any other ports).

With regard to clarification (1), claims 1 and 3 have been amended to recite first and second ports "*adapted to connect to devices supporting a Fibre Channel Arbitrated Loop protocol.*" By adding the "device" limitation into the claims, it should now be clear beyond a doubt that the ports are connectable to FC_AL devices, but are not the devices themselves. With regard to clarification (2), claim 1 has been amended to recite a route determination apparatus "for programming the crossbar switch to establish *direct paths between the first and second ports* in the crossbar switch, *the direct paths excluding all other ports.*" Claim 3 has similarly been amended to recite a route determination apparatus "for selecting a *direct route between the first and second ports* based on received Fibre Channel Arbitrated Loop primitives from the ports, *the direct route excluding all other ports.*" By adding a limitation that excludes all other ports from the direct path or route, it should now be clear beyond a doubt that the direct path or route does not pass through or include any other ports except the source and destination ports.

With the intent of the claim amendments now defined, the claim rejections will now be addressed. Claims 1 and 3-7 were rejected under 35 U.S.C. §102(e) as being anticipated by Coffey in view of Black. Applicants respectfully submit that this rejection is improper, because a rejection under 35 U.S.C. §102(e) is properly made only with respect to a single reference. Nevertheless, Applicants presume that the Examiner intended to reject claims 1 and 3-7 under 35 U.S.C. *§103(a)*

as being *unpatentable over* Coffey in view of Black, and the remainder of this response operates under this presumption.

Coffey contains no disclosure, teaching or suggestion at all related to a crossbar switch that establishes a *direct path* or route between the first and second ports *that excludes all other ports*, as recited in claims 1 and 3. As described above, the direct path or route recited in claims 1 and 3 does not pass through or include any other ports except the source and destination ports. The Examiner asserts that because the CPS in Coffey makes a connection between ports, Coffey therefore discloses a crossbar switch that establishes a direct path or route between ports as recited in claims 1 and 3. However, this assertion is incorrect. The CPS can be configured during initialization to form a *loop of devices* (see Figure 4 and corresponding Figure 5 of Coffey). This configuration is described in paragraph [0104]. Although the loop may be re-configured to connect FC-AL analyzers into the loop and different points (see paragraph [0105] and Figure 4), nevertheless *all devices are always connected in a loop*. Because the devices are always connected in a loop, each path or route between devices must pass through other devices in the loop. The devices in Coffey are therefore *never directly connected* to each other in a manner that *excludes all other ports*, and no direct path is formed.

Coffey also does not disclose, teach or suggest a crossbar switch that "*creates the direct paths* between the first and second ports *based on the OPN arbitrated loop primitives*," as recited in claim 1. Applicants respectfully submit that the Examiner is not appreciating the difference between the creation of a *direct path* and the creation of a *connection*. The crossbar switch as recited in claim 1 creates physical paths (i.e. *direct paths*) between two ports based on OPN primitives. In other words, the direct paths are created when the OPN primitives are received. The Examiner asserts that because the CPS in Coffey makes a *connection* between ports based on the OPN primitive, a direct path has been created. However, this is not a correct statement. The physical paths in Coffey are created by the CPS *during initialization* (not when OPN primitives are received) to form a *loop of devices* (see Figure 4 and paragraph [0104] of Coffey). Paragraph [0068], relied upon by the Examiner for support, only discloses use of an OPN primitive to form a connection

between originator and destination ports within a *pre-existing loop* (i.e. after the physical paths have been created).

Coffey is also completely silent as to "a route determination apparatus . . . including a routing table comprised of Arbitrated Loop Physical Addresses (ALPAs) and their associated ports," as recited in claims 1 and 3. In the Office Action, the Examiner refers to Figure 6 of Coffey and states that the FC-Analyzer comprises a memory for storing source and destination addresses. However, nowhere in Coffey is a memory of any sort disclosed for storing source and destination addresses. Not surprisingly, Figure 6 of Coffey does not show a memory for storing source and destination addresses. The only reference to the storing of source and destination addresses is found in paragraph [0121], which states that the source and destination address of a frame is stored only if the frame is found to be invalid; if the frame is valid, the source and destination address are discarded. However, the stored source and destination addresses of an invalid frame in Coffey is not in any way part of a routing table. The nodes in Coffey are only aware of adjacent nodes and their addresses, and therefore do not maintain a table of ports and their associated ALPA addresses.

Coffey also does not disclose, teach or suggest a "route determination apparatus . . . *directly coupled to each of the plurality of ports* and the crossbar switch *through separate signaling paths*" as recited in claims 1 and 3. In the Office Action, the Examiner equated the route determination apparatus in claims 1 and 3 with the combination of the FC-Analyzers and the SES processor in Coffey. However, as Figure 1 of Coffey illustrates, neither the FC-Analyzer 70 nor the SES processor 7 are directly coupled to each of the plurality of disks 80 (referred to as "ports" by the Examiner) through separate signaling paths. In fact, the FC-Analyzer 70 has no direct connection to the disks 80, and the SES processor 7 is connected to each of the disks 80 *only through a common bus* (SPI bus 54 and ESI bus 52, with or without the data gatherer block (see paragraph [0035])). In other words, there are no separate signaling paths between the route determination apparatus and the disks 80 in Coffey.

Coffey also fails to disclose, teach or suggest "a crossbar switch coupled to said first and second ports," as recited in claims 1 and 3. As described above, the ports recited in claims 1 and 3

are not devices (e.g. disks), but rather are separate from the devices. The Examiner is invited to study FIG. 5 of the application, which illustrates an example of the distinction between ports and devices. In FIG. 5, a loop switch 200 includes ports 232-239 which are separate from devices or nodes N1-N7. The Examiner asserts that because Coffey discloses Disk 0 connected to CrossPoint Switch (CPS) input A, and Disk 1 connected to CPS input B (see paragraph [0095] and Figure 5), Coffey therefore discloses "a crossbar switch coupled to said first and second ports" as recited in claims 1 and 3. However, this assertion is not correct. Disk 0 and Disk 1 are devices, not ports. Therefore, Coffey fails to disclose a crossbar switch coupled to said first and second ports, and instead discloses at most a crossbar switch coupled to first and second *devices*.

Black fails to make up for the deficiencies of Coffey. For example, Black also does not disclose, teach or suggest a "route determination apparatus . . . *directly coupled to each of the plurality of ports* and the crossbar switch *through separate signaling paths*" as recited in claims 1 and 3. As shown in Figure 4 of Black, the routing table 127 is not directly coupled to the ports 102 and crossbar switch 100 through separate signaling paths. Rather, the routing table 127 is coupled to the ports 102 *through a protocol bus* 121 (see col. 14 lines 29-31 of Black), and is only *indirectly coupled to the crossbar switch* 100 through the ports 102. In other words, there are no separate signaling paths between the routing table 127 and the ports 102 and crossbar switch 100 in Black.

Therefore, even if one skilled in the art would have been motivated to combine Coffey and Black, neither Coffey nor Black, alone or in combination, discloses, teaches or suggests all of the limitations of claims 1 and 3.

Because neither Coffey nor Black, alone or in combination, discloses, teaches or suggests all of the limitations of claims 1 and 3, it is respectfully submitted that the rejection of claims 1 and 3 under 35 U.S.C. §103(a) as being unpatentable over Coffey in view of Black has been overcome. In addition, because claims 4-7 depend from claim 3, the rejection of those claims has also been overcome for the same reasons provided above with respect to claim 3.
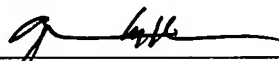
In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

If, for any reason, the Examiner finds the application other than in condition for allowance, Applicants request that the Examiner contact the undersigned attorney at the Los Angeles telephone number (213) 892-5752 to discuss any steps necessary to place the application in condition for allowance.

In the unlikely event that the transmittal letter is separated from this document and the Patent Office determines that an extension and/or other relief is required, Applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing Docket No. 491442011620.

Dated: February 7, 2006

Respectfully submitted,

By _____
Glenn M. Kubota
   Registration No.: 44,197
MORRISON & FOERSTER LLP
555 West Fifth Street, Suite 3500
Los Angeles, California 90013
(213) 892-5200